

Barber Lab DNTP Dilutions

Master Stock Solutions
A=G=T=C= 100 mM

Goal= 8 mM dNTP
= 2 mM of each A, T, G, C

Step 1: Dilute Stock (Stock = 100 mM)

$$C_1 \times V_1 = C_2 \times V_2$$
$$100 \text{ mM} \times 80 \text{ mL} = 8 \text{ mM} \times 1000 \text{ mL}$$

80 μ l + 920 μ l = 1000 μ l of 8 mM ATP, GTP, CTP, TTP
^ATP ^H₂O
GTP,
etc .

ADD 80 μ l of each deoxynucleotide to 920 μ l of water.

Step 2: Combine Stocks (dATP, dTTP, dGTP, dCTP)

$$C_1 \times V_1 = C_2 \times V_2$$
$$8 \text{ mM} \times 100 \text{ } \mu\text{l} = 2 \text{ mM} \times 400 \text{ } \mu\text{l}$$

100 μ l ATP + 100 μ l TTP + 100 μ l GTP + 100 μ l CTP = 400 μ l of 8 mM dNTPS

Combine 100 μ l of each diluted stock (dATP, dTTP, dGTP, dCTP) together.